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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,291	07/26/2006	Ferdi Schuth	100716-62 KGB	7658
27387	7590	10/15/2010	EXAMINER	
LONDA, BRUCE S. NORRIS MCLAUGHLIN & MARCUS, PA 875 THIRD AVE, 8TH FLOOR NEW YORK, NY 10022			BUI, DUNG H	
			ART UNIT	PAPER NUMBER
			1775	
			MAIL DATE	DELIVERY MODE
			10/15/2010	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/564,291	<b>Applicant(s)</b> SCHUTH ET AL.	
	<b>Examiner</b> DUNG BUI	<b>Art Unit</b> 1775	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,7 and 9-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7 and 9-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/28/10</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1, 4-5, 7, and 9-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heung (US 6432379) in view of Ovshinsky (US 6478844) and Rendina (US 20030190501).

The abstract, figure 1, and column 4, line 11-29, Heung discloses material with the same structure as that recited in claims 1, 4-5, 7, and 9-14.

As regarding claims 1 and 5, Heung does not disclose the hydrogen storage component selected from (a) alkali alanate, (b) a mixture of aluminum metal with alkali metal and/or alkali metal hydride, (c) magnesium hydride, and (d) mixtures of any of (a) – (c), wherein the hydrogen storage component is encapsulated in a porous matrix. It would have been obvious to one having ordinary skill in the art at the time of the

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invention was made to have the hydrogen storage component selected from (a) alkali alanate, (b) a mixture of aluminum metal with alkali metal and/or alkali metal hydride, (c) magnesium hydride, and (d) mixtures of any of (a) – (c), wherein the hydrogen storage component is encapsulated in a porous matrix, since it is well known in the art as taught in US 6478844 (Ovshinsky – column 4, lines 25-43), US 6328821, and US 20030162059 that the substitution of one hydride to another for the same purpose.

Also regarding claims 1 and 5, Heung as modified does not disclose a porous matrix select from the group consisting of carbon aerogels, carbons xerogels, and carbon and meso-structured carbons. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to provide a porous matrix select from the group consisting of carbon aerogels, carbons xerogels, and carbon and meso-structured carbons, since it was known in the art as showed in Rendina (US 20030190501 – [0011]).

As regarding claim 10, Hung does not disclose material comprising a hydrogen storage component encapsulated in a porous matrix, wherein the hydrogen storage component is Ti-doped NaAlH<sub>4</sub>. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to provide material comprising a hydrogen storage component encapsulated in a porous matrix, wherein the hydrogen storage component is Ti-doped NaAlH<sub>4</sub>, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. In

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addition, the hydrogen storage component is Ti-doped NaAlH<sub>4</sub> was known in the art as showed in Jensen et al (US 20010051130 – [0023]-[0024] and [0027]).

### ***Response to Arguments***

4. In response to applicant's argument that Applicants' remark that a person having ordinary skill in the art would not have combined Heung and Ovshinsky in the first place, and certainly not in any way that would achieve the present invention and Ovshinsky describes hydrides intended to be used as powders, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUNG BUI whose telephone number is (571)270-7077. The examiner can normally be reached on Mon. - Thurs., 7:30 a.m.-5 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Marcheschi can be reached on (571)272-1374. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jason M. Greene/  
Primary Examiner, Art Unit 1775

/D. B./  
Examiner, Art Unit 1775